

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An apparatus for validating the presence of an authorized ~~accessory~~ consumable of a device, ~~the consumable having first authentication integrated circuit~~ that is configured to store a secret key K, the apparatus comprising
an second integrated circuit which stores a secret key K, is configured to ~~define~~ hold a random number ~~generator~~ function which returns random number R and is configured to apply a function $F[R]$ to return $F_K[R]$, based on the secret key K; and
a control system which is configured to request $F_K[R]$ from the second integrated circuit and from ~~a further~~ the first integrated circuit ~~positioned on the accessory~~ and to compare $F_K[R]$ from both the integrated circuits.
2. (Original) An apparatus as claimed in claim 1, in which the function $F[R]$ is a one-way function.
3. (Currently Amended) An apparatus as claimed in claim 1, in which the integrated circuit is configured to advance R to next in sequence with each invocation of the random number ~~generator~~ function.
4. (Currently Amended) An apparatus as claimed in claim 3, in which the integrated circuit includes a linear feedback shift register which defines the random number ~~generator~~ function.
5. (Currently Amended) An apparatus as claimed in claim 1, in which the control system is configured to determine whether or not $F_K[R]$ generated by the second integrated circuit ~~of the apparatus~~ is equal to $F_K[R]$ generated by the first integrated circuit ~~of the accessory~~ and to validate the ~~accessory~~ consumable if said values are equal.

6. (Currently Amended) A method of validating the presence of an authorized ~~accessory~~ consumable of a device, the method comprising the steps of:

storing a secret key, K, in an integrated circuit of the device and in an integrated circuit of the ~~accessory~~ consumable;

generating a random number R with the ~~integrated circuits~~ integrated circuit of the device;

applying a function $F[R]$ to R using K at each integrated circuit to return $F_K[R]$ at each integrated circuit;

requesting $F_K[R]$ from both integrated circuits; and

comparing $F_K[R]$ from both integrated circuits.